

medium tall, very hardy; annually productive.

The following were donated by Dan Thompson, Agriculture Canada, Center for Plant Health, 8801 East Saanich Road, Sidney, British Columbia V8L 1H3, Canada. Received 02/05/1992.

PI 590159. *Malus domestica* Borkh.  
Loyalist.

The following were developed by L.P.S. Spangelo; S.J. Leuty; H.B. Heeney. Donated by Dan Thompson, Agriculture Canada, Center for Plant Health, 8801 East Saanich Road, Sidney, British Columbia V8L 1H3, Canada. Received 02/05/1992.

PI 590160. *Malus domestica* Borkh.

Moir. Pedigree - McIntosh x Dg22-81 [Jonathan x (Rome Beauty x *Malus floribunda* 821 sib)]. Tested as Ottawa 548. Intro: 1978. Comments:: Fruit small than McIntosh, up to 76 mm in diam; round, conic skin color medium lively red on light green to yellow ground color, prominent white lenticels; flesh creamy white slightly tinged with green, crisp, moderately acid; processed fruit was rated fair for juice and poor for sauce and slices harvest with Delicious; storage life 2-3 months at 2C, blooms 2-3 days after McIntosh. Tree: moderately vigorous, spreading; high yield efficiency; resistant to apple scab & cedar apple rust, susceptible to fire blight, quince rust. Development includes Smithfield Exp. Farm, Trenton, Ont. CA.

The following were developed by Raymond L. Granger, Agriculture Canada, Research Station, 430 Gouin Blvd. St.-Jean-sur-Richelieu, Saint-Jean, Quebec J3B 3E6, Canada; G.L. Rousselle. Donated by Dan Thompson, Agriculture Canada, Center for Plant Health, 8801 East Saanich Road, Sidney, British Columbia V8L 1H3, Canada. Received 02/05/1992.

PI 590161. *Malus domestica* Borkh.

Richelien. Pedigree - Ottawa 521 x 11-51; ancestry includes Melba, McIntosh, Jonathan, Rome Beauty and *Malus floribunda* 821. Cross made 1964 in Ottawa, selected at Trenton, Ontario; evaluated at Frelighsburg, Quebec. Tested as Ottawa 635. Comments:: Fruit: medium-large, 65-70 mm diam, color 60% to 65% red on light green color; shape oblong, conical; flesh white, juicy crisp, mild to subacid. High sugar and aroma, quality good. Introduced as midseason dessert apple, also suitable for culinary use. Harvest 1 week before McIntosh; storage life 3 months or more in air. Tree: vigor medium, spreading, precocious, annually productive; resistant to apple scab (V) moderately resistant to powdery mildew and to fire blight; very susceptible to cedar apple rust and quince rust.

The following were developed by W.D. Lane; R.A. MacDonald. Donated by Dan Thompson, Agriculture Canada, Center for Plant Health, 8801 East Saanich Road, Sidney, British Columbia V8L 1H3, Canada. Received 02/05/1992.

PI 590162. *Malus domestica* Borkh.

Shamrock. Pedigree - McIntosh 10C-8-43 (irradiated spur type) x Starkspur Golden Delicious; cross made by K. Lapins in 1970; selected 1978; tested as 8C-1-15. Comments:: Fruit: medium, about equal to Golden Delicious; shape round slightly oval; color dark green with white lenticels, very similar to Granny Smith, attractive; sometimes a slightly brown-red color develops on the sun-exposed side. Flesh juicy, firm, bruise resistant; eating quality good; harvest 3 days before McIntosh. Storage life at 0 - 3 C. Keeps in good condition for 7